IN THE SPECIFICATION:

Please amend the specification as follows:

Please replace the paragraph beginning at page 7, lines 1 and 2 with the following rewritten paragraph.

Figure ~~1. Shows~~ 1A shows a conventional involute gear engagement, and Figure 1B shows a conventional engagement of coupled screws.

Please replace the paragraphs beginning at page 11, lines 6 through 20 with the following rewritten paragraphs.

This helical generating line 90 is located at the pitch circle of the engagement. This helical line will be making contact with the other member, the generated. The side surface of the generated member is built in such a way as to touch the helical line of the generator along the longest possible path, it is from the line of centers 89 until the outermost edge of the thread. This is the novolute surface shown in figure 3, indicated by 11.

The contact between those two parts can not go along the full arc of the helical of the generator included within the intersecting circles of the parts. The longer that contact may be, is from the line of centers 89 to one of the extreme points of the arc. If the line contact goes from the line of centers 89 to one extreme of the arc or the other, is defined by the hand of helixes and the flank of thread making contact.

The demonstration of how the contact between the generating helical and the generated surface takes place only on one side of the line of centers 89, is written in point 3.

Please replace the paragraphs beginning at page 13, lines 7 through 21 with the following rewritten paragraphs.

In the zone between the pitch circle of the pinion, and its exterior diameter, is located as much material as needed to contact the wheel's generator line. Again, the longest possible path for this contact, goes from the line of centers 89 until the outer edge of the thread, on one single side of the line of centers 89. In this way, the pinion is provided of a novolute surface that will be in contact with the wheel's generator line all the time while the engagement turns following the conjugate

action law. The last step is the construction of the second counternovolute surface within the wheel's body.

The shape of this counternovolute is defined by the novolute surface of the pinion interacting within the wheels body: The counternovolute is the shape of the wheel's body that having as much material as possible, does not interfere with the novolute surface of the pinion. Again, the side of the line of centers 89 on which this process takes place, is the opposite one to that where the first novolute surface was built.

Please replace the paragraph beginning at page 14, lines 1 through 8 with the following rewritten paragraph.

All the analysis of the contact already made for the single novolute engagement can be repeated for the second novolute of the set. As figure 4 shows, the contact line of the second novolute is located to the other side of the line of centers 89. In this way, with the second novolute the line of contact is greatly extended, covering an angle as wide as the intersection of both screw bodies. The contact for one

novolute, goes form the pitch point to point 48, 51, and the contact for the other novolute goes from the pitch point to the point 39, 36.

Please replace the paragraph beginning at page 18, lines 11 through 22 with the following rewritten paragraph.

From this view is obvious that the generator member, which includes the positions 38, 39, and 40, must be built with material located in the direction with increasing Z coordinates, and its helix must be that shown in the figure. The generated member, containing the positions 35, 36, and 37 must have the material in the direction with decreasing Z coordinates, for the hand of helix that was defined at the beginning. In such way, there will not be interference between the points of the two bodies in any position, and they will contact each other only in the second position described. Also, the side of the line of centers 89 where the contact is defined by the hands of helixes of the parts. This is shown clearly from the view in the Z X plane. If the hand of the helixes is inverted, the side of the line of centers 89 where the contact occurs is switched.

Please replace the paragraphs beginning at page 19, line 1 through page 20, line 5 with the following rewritten paragraphs.

If the generator point 39 and its body, are located towards the decreasing coordinates in the Z direction, ~~,~~(opposite side in respect to the contact locus), then the generated point 36 and its body has to be located in the bigger Z coordinates. In such condition, the position where the two bodies contact each other is located in the other side of the line of centers 89, with the same hands of helixes. Such condition exists for the same engagement, when the rotation direction is inverted, maintaining the same member acting as driver. The contact between the same two bodies takes place on opposite flanks of the threads.

The same point 39 will make contact with the pinion in a curved line, comprised between the points 39, and the line of centers 89. Then, the contact between the point 39 and the pinion body will occur in decreasing diameters of the pinion. Each one of these points of the pinion, can be analyzed in the same way as the point 36. They all behave in a like manner, having contact with point 39, only once, in each full turn of the engagement.

In a like manner, it can be said that each and every point of the generating helical located within the external diameter of the pinion, behaves in the same way as point 39, and interacts with other points of the pinion, in a similar manner as the point 36 does. Contact between wheel's generator helical, and pinion generated surface, takes place only to one side of the line of centers 89. Which side of the line of centers 89 is the one in contact, depends on the combination of hands of the helixes and flanks of the threads in contact: Right hand wheel with left hand pinion, make contact on one side of the line of centers 89, when the contacting flanks are in a given side. The contact for the same parts takes place on the other side of the line of centers 89, if their contacting flanks are switched.

Please replace the paragraphs beginning at page 22, line 7 through page 23, line 3 with the following rewritten paragraphs.

It can be seen from the figure, that the generating action takes place in the right side of the line of centers 89. It is the opposite side to the one where points 36 and 39 made contact, as the former analysis showed. As it has been shown that points 48 and 51 belong to the same parts containing the points 36 and 39, and are located on the same flanks of the parts, it can be said that the pinion, containing the generating point, has the material located from point 48 and towards the zone with smaller Z coordinates. Also it can be said that the wheel, containing point 51, has its material located from point 51 and towards the zone with bigger Z coordinates, exactly as it has been said of points 36 and 39, which belong to the same flanks of the same parts.

A description for points 48 and 51, similar to that performed for points 36 and 39 follows:

The angle included within point 48, the center of the pinion, and the line of centers 89, named $\alpha 1$, is equal to that formed by the line of centers 89 and point 49. Point

47 is located somewhere before the transmission has rotated to get to point 48. The transmission must rotate an angle equal to $\alpha 4$, to get to point 48. In the figure, 46 indicates $\alpha 4$ and 45, $2\alpha 1$.

Please replace the paragraphs beginning at page 23, line 9 through page 24, line 20 with the following rewritten paragraphs.

Generator and generated points only make contact once in every full turn of the engagement: by definition, they are in touch when in the position 48 and 51. Later, when the rotation has occurred and they are positions in 49 and 52, they do not touch, as point 52 is farther away from the line of centers 89 than point 49. As can be seen in the view in the plane of axis, (With coordinates Z X), where the distance in the X direction separating points 49 and 52, where the condition of the two parts being one away from the other, considering the side towards where the material of the parts is located. Again seen on the plane of rotation, it is clear that points 47 and 50 are not in contact, as they are separated by a considerable distance in the Y direction.

Any generator point of the generating helical of the pinion, behaves in the same way as the generating point 48. Then, each point of the generating helical of the pinion generates a series of points in the wheel. Each one of this generated points, make contact with the pinion only once in every turn of the engagement. All these generated points are located in the same side of the line of centers 89 as the generated point 51, but each one is separated of the center of the wheel by a different distance.

Then, it can be said that each generator point contacts the wheel all the time while traveling from the outermost point of the wheel, until reaching the line of centers 89. Obviously, all this points of contact are located in the same rotation plane. It can also be said that the path of contact exists only on one side of the line of centers 89.

The other fact that all the analysis shows is that each generating helical belonging to each member of the transmission, generates novolute surfaces on the matting member on different sides of the line of centers 89. Then, the construction of double novolute engagements produce contact between the two matting members of the engagement along all of the angle included inside the overlapping sectors of

the two parts, seen in the plane of rotation. Then, the double novolute type of construction complements the path of contact obtained with single novolute engagements, that go only from the line of centers 89 to the outermost point of intersection of the two bodies.

Please replace the paragraph beginning at page 26, lines 3 through 13, with the following rewritten paragraph.

There is a generating point of the helical generating line 91 existing within this plane, for each position of the engagement during its rotation. The points corresponding to each position, are indicated by 69, 70, 71, 72, and 73, for the first plane in the figure. As all of these points belong to the generating helical, they must be included within the cylinder containing this helical line. As they are all included within each plane of the analysis, they all share the same coordinate in the X-axis. These points also share their coordinate in the Y-axis, as the axis of the generating member is parallel to the Z axis. As all those points have the same X and Y, they constitute a straight line, and as they belong to the cylinder that includes the generating helical, they belong also to a generatrix of the said cylinder.

Please replace the paragraph beginning at page 27, lines 12 through 16, with the following rewritten paragraph.

These serial analyses can be done for positions of generating points between the line of centers 89 and the outermost point belonging to both members of the engagement (58 in figure). Contact points only exist to one side of the line of centers 89, as was demonstrated above in this document.

Please replace the paragraphs beginning at page 28, lines 1 through 15, with the following rewritten paragraphs.

A similar analysis can be performed for the same engagement but looking to the generating process when the wheel is the generating member. Then the second generated novolute surface is obtained located in the other side of the line of centers 89.

The conjunct of generatrixes that are shared by both members of the engagement build up the surface of action.

In double novolute engagements there might be two surfaces of action if both generating diameters are not coincident upon the line of centers 89.

4.- Theoretical Limits Of The Profile.

The theoretical limits are fixed by the minimum possible distance between the generating point and the center of the generated part and the farthest point from the generated center where the generating point can still produce the movement of the generated part while the gear set is in operation located when the generating point is on the line of centers 89 at the place where it is farthest from the center of the generated part.

Please replace the paragraphs beginning at page 29, line 1 through page 30, line 5, with the following rewritten paragraphs.

Beginning at the point closest to the generated shaft when the generating point cuts the line of centers 89, the Novolute is tangent to a straight line perpendicular to the shafts. The profile continues developing towards the exterior (receding from the generated axis and approaching the generating axis) as a curved line with an

increasing radius the outermost point of which is that where the generating point cuts the blank of the generated wheel.

5.2- Generating Circle Greater Than The Pitch Circle: The Counternovolute.

The generating process of a novolute whose generating diameter is bigger than the pitch diameter takes place on the other side of the line of centers 89 in respect to the side where a simple novolute forms if generated by a diameter equal or smaller than the pitch diameter.

The typical form of the Novolute generated by a circle greater than the pitch circle is named counternovolute, and has a concave shape.

In the point closest to the pitch point it begins with some inclination with respect to the line of centers 89 making a blunt edge with the novolute that might exist in the same part but in opposite direction from the pitch point.

Towards the center of the part containing the counternovolute it goes following a curved path every time closer to the line of centers 89 reaching a point where is

parallel with it and then keeps on a curved path with decreasing curvature radius until its last point, where its tangent is parallel to the shafts. All the time the curve is in the same side of the line of centers 89. This last point exists where the generating line is closer to the center of the part containing the counternovolute.

Please replace the paragraph beginning at page 31, lines 8 through 14, with the following rewritten paragraph.

In order to fulfill this requisite, a curved generating profile has been developed, which is accommodated below the pitch point of the part, continuing the novolute that is built on that part above the pitch point. To have a smooth curvature, the profile might begin in the pitch point as a curve that is tangent to the line of centers 89. Then on, as it goes away from the pitch point, it also goes away from the line of centers 89. This profile might have a circular section, or might be a different curve.

Please replace the paragraph beginning at page 38, line 16 through page 39, line 3, with the following rewritten paragraph.

Novolute screws can be built with asymmetrical thread profiles, with one side having wide contact, and thus good ability for load carrying, and the other side, with contact only towards the line of centers 89, and low load carrying capacity. The side with short contact, can accommodate a stronger thread profile, making it thicker towards the base, and thinner towards its upper end. With novolute screws, then, it is possible to use the asymmetrical profile concept with advantage, as the thread becomes stronger and can be built thinner for the same service, meaning that the face width of the engagement becomes smaller.